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Cc: Fritz, Matthew[Fritz.Matthew@epa.gov]
From: Pieh, Lusen
Sent: Mon 8/10/2015 9:00:41 PM
Subject: Update - Abandoned Mine Release into Animas River; San Juan County, CO

David and Karen,

See below for the latest update regarding the Colorado release.

Report as of 1500 EDT on 8/10/2015

Overview: On 8/5, an EPA and Colorado State Division of Reclamation Mining and Safety team was working to investigate and address contamination at the abandoned Gold King Mine in San Juan County, CO. This work resulted in a large release of mine wastewater into the upper portions of Cement Creek. Initial estimates indicated that the release is approximately one million gallons that was held behind unconsolidated debris near an abandoned mine portal. There were several workers at the site at the time of the breach and all were unharmed. The release's path flows through three of EPA's regions: Region 8—Colorado, Utah and the Southern Ute Tribe; Region 6--New Mexico; and, Region 9--Navajo Nation. The R6 Mobile Command Post arrived in Farmington, NM on 8/9.

The flow from the Gold King mine was measured at 548 gallons per minute on 8/8. The mine water is being treated in a series of settling ponds constructed near the portal. The treatment appears to be effective. The pH of the water is being raised with the addition of lime and sodium hydroxide solution to facilitate sedimentation of the metals in the ponds and flocculant is being added to increase the amount of sedimentation. The treated water that is being discharged to Cement Creek has a pH of 5.5. Baseline water quality data from the past 17 years has been obtained and will be compared with the new water quality data.

A draft sampling plan is being developed to address sampling and analysis of sediment and well-water. This plan is being developed jointly by Regions 8, 6 and 9. Sampling will continue throughout the impacted area as well as ahead of the plume to establish baseline water quality.

The incident caused a spike in concentrations of total and dissolved metals as the contaminated mine water moved downstream. These concentrations began to trend toward pre-event conditions by 8/6. Data collected on 8/7 and 8/8, once it is evaluated, will inform whether the trend towards pre-event conditions continues. EPA is working with State and local government officials to determine when to reopen drinking water intakes and open the river for recreation. The contaminant plume is depositing sediments and EPA is beginning to assess the impacts of the sediment.

State, Local and other Federal Agency Actions: San Juan County officials are engaged in the response activities. State officials are also on scene. Following the release, the Colorado Department of Public Health and the Environment (CDPHE) notified water users downstream so they could take appropriate steps to turn off intakes until the contaminated water passes. The Colorado Fish and Wildlife Conservation Office is monitoring effects on wildlife and aquatic life in the affected area.

The La Plata County Sheriff issued an order closing the Animas River to all watercraft from the north County line (San Juan County, Colorado) to the south County line (at the Colorado/New Mexico State line) until further notice. Furthermore, all such watercraft must be removed from the Animas River within the locations cited above. The decision was made after consultation with the EPA, CDPHE, the San Juan Basin Health Department, and representatives of the Southern Ute Indian Tribe. The Order will remain in effect until it is determined that the river is safe. R8 contacted the US Fish and Wildlife Service and the US Department of Interior about this incident.

The Colorado Fish and Wildlife Conservation Office is monitoring effects on wildlife and aquatic life in the affected area. The CDPHE is assisting with drinking water concerns.

The U.S. Geological Survey (USGS) measured increased river flows and provisionally calculated flow volume of approximately 3 million gallons discharged from the Gold King Mine. EPA's original estimate was based on an estimate of the size of the mine's entrance. The USGS estimate used a streamgage instrument that measures volume by measuring flow which is much more precise.

Region 8 is coordinating the incident with Regions 6 and 9, the States of Colorado, Utah and New Mexico, and the Navajo Nation and Southern Ute Tribes as well as San Juan County, City

of Durango and the Town of Silverton. Region 8 is also coordinating with Agency for Toxic Substances and Disease Registry (ATSDR) in response to public health concerns and questions associated with the mine waste plume. ATSDR has been in communication with local health officials at San Juan County Basin Health Department in Colorado.

Region 9 is working with the Navajo Nation and the Bureau of Indian Affairs. The discharge is in the vicinity of the Navajo Nation boundary near Kirtland, NM. Navajo officials have reacted quickly in assessing their well fields and drinking and irrigation water intake systems and issuing a precautionary "do not use" public service announcement regarding water from potentially impacted sources. Region 9 held a conference call on 8/9 with the Navajo Nation EPA and Navajo Department of Public Safety. The Navajo Nation EPA surface water monitoring program (Shiprock Office) collected water and sediment samples from the San Juan River on 8/8 prior to the release's impact. Region 9 is providing personnel to coordinate and conduct increased sample collection and lab analysis. The Navajo Nation issued an emergency declaration that covers the entire San Juan River.

Region 6 is coordinating with the New Mexico Environmental Department (NMED) to determine the potential impacts on water quality in the State and impacted communities that rely on the river. EPA and NMED are providing free water quality testing for private drinking water well owners in the affected area as well as providing water quality monitoring for the five drinking water systems with intakes on the river. EPA is also working with U.S. Fish and Wildlife Service to monitor potential impacts to wildlife.

EPA Actions: Region 8 staff are coordinating with relevant county and city officials. EPA has met with San Juan County officials and La Plata County officials. R8 staff met with the Durango City Engineer to analyze and implement measures to protect the Durango drinking water supply. The Region 8 Regional Administrator flew to Durango on 8/7 and met OSCs and local officials, and attended a public meeting on the incident.

EPA's ASPECT (Airborne Spectral Photometric Environmental Collection Technology) flyover observed that the conditions from Farmington, NM to Durango, CO show improvement. While the San Juan River remains discolored, the leading edge of the contaminant plume is no longer visible. While these visual observations are a useful indicator, water quality data will provide more detailed information about river conditions.

EPA is coordinating with ATSDR in response to public health concerns/questions associated

with the mine waste plume. ATSDR has been in communication with local health officials at San Juan Basin Health Department in Colorado.

EPA has deployed ten OSCs in Silverton and Durango, CO and Farmington, NM. Water quality experts, technicians and contractors will respond to the discharge as it reaches communities in New Mexico. Two Public Information Officers (PIOs) are also on site in Durango at the Joint Information Center (JIC). In Region 8, there are 21 employees providing support services to the response. Several Incident Management Team (IMT) positions were deployed to Durango on 8/10. Two Community Involvement Coordinators (CICs) were deployed to Farmington on 8/10 and will meet with local Navajo Chapter officials and host public meetings in the coming days. The CICs will also partner with Navajo Nation EPA (NNEPA) and Navajo Department of Public Safety to ensure comprehensive outreach to all affected Navajo Chapters. The EPA has tapped into several contracting mechanisms to provide support for the response including water quality sampling, drinking water and agricultural water distribution as well as construction and maintenance of water treatment ponds.

A Region 6 OSC participated in a Community Meeting with NMED and other local officials. Several topics were discussed including: potential drinking water well sampling; potential public availability of sampling results; potential EPA reimbursement for state and locals; effect of the spill on livestock and irrigation; sediment sampling; current mine site status; questions regarding the tardiness of notification; and, the Navajo Nation requested that Region 9 meet with them on 8/10 in Arizona.

Region 6 collected water quality samples from nine New Mexico locations in the river near intakes for public water treatment facilities. Each of these locations will continue to be monitored as the release makes its way past these areas. In the San Juan River, the release is moving at about 2.5 miles per hour and as of 8/9 had reached Nenahnezad, NM (approximately 9 miles west of Farmington). At the request of NMED, EPA is sending additional scientists and technicians to New Mexico to assist with water quality monitoring, sampling and outreach. Water quality data from throughout the affected region continues to be collected and evaluated. EPA released a detailed data table of the sampling in Cement Creek and the upper portions of the Animas River from 8/5, the date of the incident, and 8/6. The data table contains a list of analyzed constituents, largely metals, and their numeric value in micrograms per liter (that is equivalent to parts per billion).

EPA has a claims process for compensating citizens who suffer personal injury or property damage caused by U.S. government actions. The process includes guidance on documentation that may be required to support claims for loss of employment and loss of income, among other

claims. Region 8 has had inquiries about such claims from business owners in CO.

Media Interest: High

<http://www.cnn.com/2015/08/09/us/colorado-epa-mine-river-spill/>

<http://www.usatoday.com/story/news/nation/2015/08/10/navajo-nation-epa-mine-wastewater-spill/31399517/>

http://www.nytimes.com/2015/08/11/us/durango-colorado-mine-spill-environmental-protection-agency.html?_r=0

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